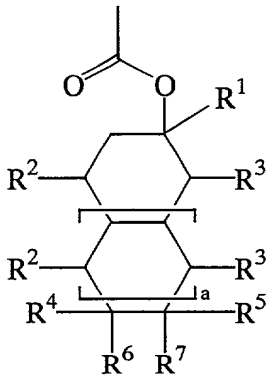
CLAIMS:

1. A polymer containing a group of the following general formula (1) and having a weight average molecular weight of 1,000 to 500,000,



(1)

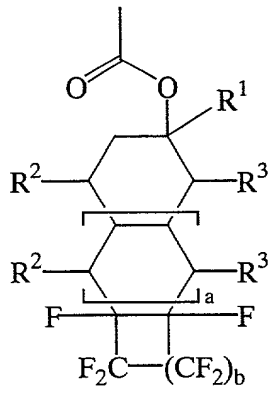
wherein R^1 to R^3 each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, R^2 and R^3 may bond together to form a ring and in that event, each is an alkylene group of 1 to 20 carbon atoms which may contain a hetero atom such as oxygen, sulfur or nitrogen,

R^4 and R^5 each are hydrogen or fluorine,

R^6 and R^7 each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, at least one of R^6 and R^7 contains at least one fluorine atom, R^6 and R^7 may bond together to form a ring and in that event, each is a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms, and

"a" is 0 or 1.

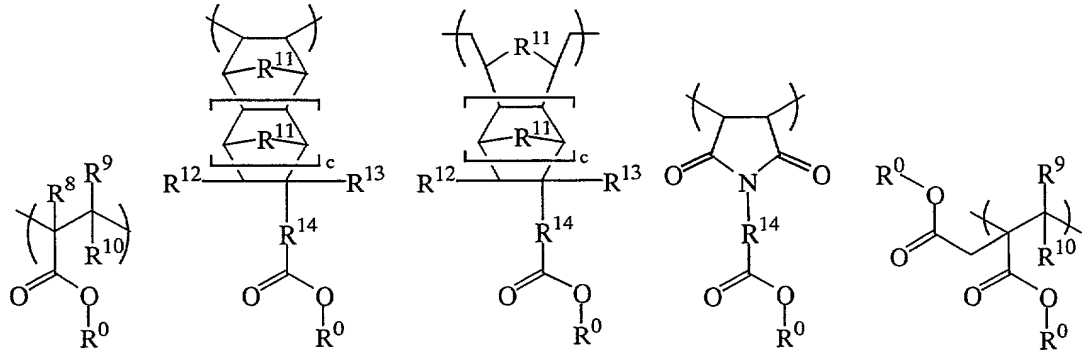
2. The polymer of claim 1 containing a group of the following general formula (1a):



(1a)

wherein R^1 to R^3 each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms, R^2 and R^3 may bond together to form a ring and in that event, each is an alkylene group of 1 to 20 carbon atoms which may contain a hetero atom such as oxygen, sulfur or nitrogen, "a" is 0 or 1, and "b" is an integer of 1 to 4.

3. The polymer of claim 1 having a partial structure of any one of the following general formulae (2-1) to (2-5):



(2-1) (2-2) (2-3) (2-4) (2-5)

wherein R^0 is a group of formula (1) in claim 1 or a group of formula (1a) in claim 2,

R^8 to R^{10} each are hydrogen, fluorine or a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms,

R^{11} is a methylene group, oxygen atom or sulfur atom,

R^{12} and R^{13} each are hydrogen, methyl or $CH_2CO_2R^{15}$,

R^{14} is a straight, branched or cyclic alkylene or fluorinated alkylene group of 1 to 20 carbon atoms,

R^{15} is a straight, branched or cyclic alkyl or substituted alkyl group of 1 to 20 carbon atoms, and

"c" is 0 or 1.

4. A resist composition comprising the polymer of claim 1.

5. A chemically amplified, positive resist composition comprising

(A) the polymer of any one of claims 1 to 3,

(B) an organic solvent, and

(C) a photoacid generator.

6. The resist composition of claim 5 further comprising (D) a basic compound.

7. The resist composition of claim 5 further comprising (E) a dissolution inhibitor.

8. A process for forming a resist pattern comprising the steps of:

applying the resist composition of claim 4 onto a substrate to form a coating,

heat treating the coating and then exposing it to high-energy radiation in a wavelength band of 100 to 180 nm or 1 to 30 nm through a photo mask, and

optionally heat treating the exposed coating and developing it with a developer.

9. The pattern forming process of claim 8 wherein the high-energy radiation is an F_2 laser beam, Ar_2 laser beam or soft x-ray.